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## Soviet Forced Labor: An Update

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A Research Paper

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# Soviet Forced Labor: An Update

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A Research Paper

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This paper was prepared by [redacted]  
Office of Global Issues; [redacted] Office of  
Imagery Analysis; and [redacted] Analytic  
Support Group. It was coordinated with the  
Department of State. [redacted]

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Comments and queries are welcome and may be  
directed to the Chief, Geography Division, OGI, [redacted]

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**Soviet Forced Labor:  
An Update** [redacted]

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**Summary***Information available  
as of 30 November 1985  
was used in this report.*

The Soviet Union maintains a large forced labor system that extends to nearly every region of the country. In Soviet society, forced labor is not only a penal system that supports the criminal codes but also a labor system that supports economic development. Moreover, it serves to intimidate Soviet citizens into compliance with Soviet political norms. Because the forced labor system effectively fulfills these varied functions, it is likely to continue to play a significant role in Soviet life, and, on the basis of our analysis of recent trends, we believe it will continue to expand. [redacted]

Recent analysis, [redacted] indicates that the number of forced laborers has grown from 4 million in the late 1970s to more than 4.5 million and now accounts for 3 percent of the total Soviet labor force. Over half of the forced laborers are confined—most in heavily secured camps; the rest, although not confined, are forced to work on specific projects. Current analysis indicates that:

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- The number of prisoners in forced labor camps has increased by 14 percent since 1977, and now accounts for more than 2 million out of the 2.3 million confined forced laborers. The others (250,000) are confined in urban prisons and colony settlements.
- The yearly growth rate of the camp population has averaged 1.9 percent since 1977—a rate nearly twice that (1 percent) of the total Soviet labor force over the same period.
- New camps are being built primarily in regions undergoing economic expansion: the Volga, West Siberia, East Siberia, and the Soviet Far East.
- The number of forced laborers who are not confined to camps has probably increased at nearly the same rate as the number in camps and now stands at 2.2 million.
- Construction and manufacturing are the most prevalent economic activities for forced laborers, whether in camps or not. The number of forced laborers engaged in logging has declined slightly, but some are exploiting new timber areas in East Siberia.

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- Forced labor products include general categories of wood manufactures, metal parts, construction materials, and a few end products. Forced laborers are also associated with some specific industries, such as oil, chemicals, and concrete products; with mining of coal, gold, and other minerals; and with isolated agricultural products, such as tea—but we cannot determine the extent of forced labor contribution to specific industries or export goods. [REDACTED]

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We estimate that the forced labor camp population grew at a higher annual rate (about 2 percent) during the period 1977-84 than during 1972-77 (1.5 percent). We believe this higher growth rate reflects several continuing economic, political, and social problems and policies:

- Soviet labor shortages, especially in unskilled labor or in unattractive and difficult jobs, have intensified and require increased supplements of forced labor.
- Large-scale construction projects—industries, pipelines, and railroads—and continuing economic expansion to outlying regions have exacerbated the labor shortages.
- Campaigns against crime and corruption, begun in the later Brezhnev years, intensified under Andropov and Chernenko, and continuing under Gorbachev, have produced more forced laborers and required an expansion of the labor camp network.
- Crackdowns on dissidents—refuseniks, human rights activists, religious nonconformists, minority nationalists—during the same period have also added to the forced labor population. [REDACTED]

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This assessment provides a benchmark at the outset of the Gorbachev era on which to base future evaluations of the impact of his leadership on one well-established Soviet institution—forced labor. The paper focuses on the economic aspects of the system: it updates CIA's previous estimates of the Soviet forced labor population and assesses the current use of forced labor in the economy. [REDACTED]

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**Contents**

	<i>Page</i>
Summary	iii
Why a Forced Labor System?	1
Current Assessment of Forced Labor	1
Forced Labor Camps	2
Prisons and Colony Settlements	5
Unconfined Forced Laborers	5
Role of Forced Labor	8
Use of Confined Forced Laborers	8
Manufacturing/Industrial	8
Logging and Wood Processing	10
Construction	10
Mining and Construction Materials	13
Agriculture	19
Use of Unconfined Forced Laborers	19
Living Conditions	21
Outlook	21

**Appendixes**

A.	Products of Forced Labor Activity	23
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**Crime and New Laws**

*Crime, by Soviet definition, continues on an upsurge in the Soviet Union, and the number and length of sentences meted out to forced labor are also increasing. The USSR Minister of Internal Affairs, V. V. Fedorchuk, stated in 1984 that some crimes were increasing, especially economic crimes and violent crimes aggravated by alcohol.* [ ]

***Alcoholism**—an extremely serious problem in Soviet society—is estimated to be involved in more than 50 percent of all crimes committed in the Soviet Union, according to Fedorchuk. If persons are intoxicated during the commission of a crime, Soviet courts have the power to sentence such offenders to longer terms. In May 1985, the Soviets added legislation making drunkenness in public places or at work a crime punishable by imprisonment or by correctional tasks without confinement.* [ ]

***Economic crimes** that divert goods and services from the state have been highlighted in recent campaigns. Many people have been arrested and sentenced for embezzlement, bribery, black marketing, and corruption, as well as for mismanagement and wastefulness. Criminal investigatory units and departments for combating embezzlement of state property have been strengthened, but corrupt practices continue. Theft of industrial and agricultural products and spare parts is commonplace. Some crimes are committed for economic survival; managers, for example, frequently engage in illegal acts in procuring parts or materials, not for profit but to make the system work. These crimes are often ignored, but, if brought to light by informers or audit commissions, can result in criminal prosecution.* [ ]

***Social crimes**, under which many forced laborers are sentenced, are covered by an assortment of Soviet statutes. "Hooliganism"—defined broadly as actions violating public order and expressing a disrespect for society—is still the most common crime in the Soviet Union in terms of sentencing. Parasitism, also listed as a crime against public order, covers vagrancy, begging, and evasion of work over an extended period. Other kinds of individual behavior considered crimes against the state in the Soviet Union include: voiced or written criticism against the state; unauthorized residence, internal travel, or requests for emigration; unregistered religious activities; and unauthorized assembly. The laws for some of these crimes have been expanded and strengthened recently.* [ ]

***Changes in the Soviet Criminal Code in 1984** broadened the scope of some offenses and increased the criminal liability of Soviet citizens. Most notable were additions to the definitions of treason to include acts threatening "state security" and of state secrets to include "work-related secrets." Almost any political offender can now be charged with treason under the broad Soviet definition of state security; likewise, unauthorized transmission of almost any kind of information to foreigners can bring charges under the concept that the information is a work-related secret. Another new article to the criminal code simplifies the procedures for adding a new term to the sentences of prisoners deemed guilty of "malicious disobedience" of forced labor camp regulations, thereby tending to stifle politically active prisoners or to extend their incarceration.* [ ]

***The wide range of crimes** on the books gives the Soviets ample opportunity to arrest and sentence individuals. The vast majority of forced laborers are sentenced for purely criminal acts; theft of state and personal property as well as crimes against persons and destruction of personal property are the most prevalent crimes following hooliganism. The number of persons convicted and arrested, however, for certain crimes, such as hooliganism, often depends on the Soviet attitude toward combating the crime at a given time or on the need for laborers in a particular industry. [ ] the need for workers in the Estonian oil shale fields in the late 1960s, for example, led directly to many more arrests for hooliganism and subsequent sentences to forced labor in that industry.* [ ]

***Political activists and dissidents** are prosecuted for serious crimes against the state—anti-Soviet slander is one of the common charges—as well as for lesser offenses. They often fall prey to catchall applications of hooliganism and parasitism laws. Refuseniks—those who have applied for emigration and have been refused, sometimes under the guise of possession of state secrets—are particularly susceptible to parasitism charges because they are often fired from their jobs or prevented from working in their specialty fields after applying for exit visas. Religious dissidents are likewise vulnerable to the laws of parasitism because loss of employment is a common form of official harassment against them.* [ ]

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## Soviet Forced Labor: An Update

### Why a Forced Labor System?

Forced labor has been an integral part of the Soviet political and economic scene for more than 50 years. During this time, other nations have frequently condemned the Soviet Union for maintaining a labor system tantamount to slavery. The Soviets justify the system on the grounds that corrective labor is the basic means to reform and reeducate convicted persons and that it reinforces the Soviet collective work ethic. According to evidence from Soviet emigres and defectors, forced laborers work and live in inhumane conditions, dissidents are treated extraordinarily harshly in forced labor camps, and the general populace is coerced by the system.

The continuing existence of forced labor, despite international pressures because of human rights abuses, indicates that the benefits of the system outweigh the negatives. Forced labor gives the Soviets flexibility to fill some of their labor needs while punishing political views and activities unacceptable to the regime as well as criminal behavior. The Soviets use forced labor to supplement the regular labor force in remote and environmentally hostile regions where

labor is scarce or expensive to maintain. In economically developed areas, the Soviets use forced labor to fill difficult, unhealthy, and debilitating jobs, most of which involve unskilled manual labor. Although the productivity of forced laborers is reportedly very low, their labor helps to offset some of the costs of the Soviet penal system.

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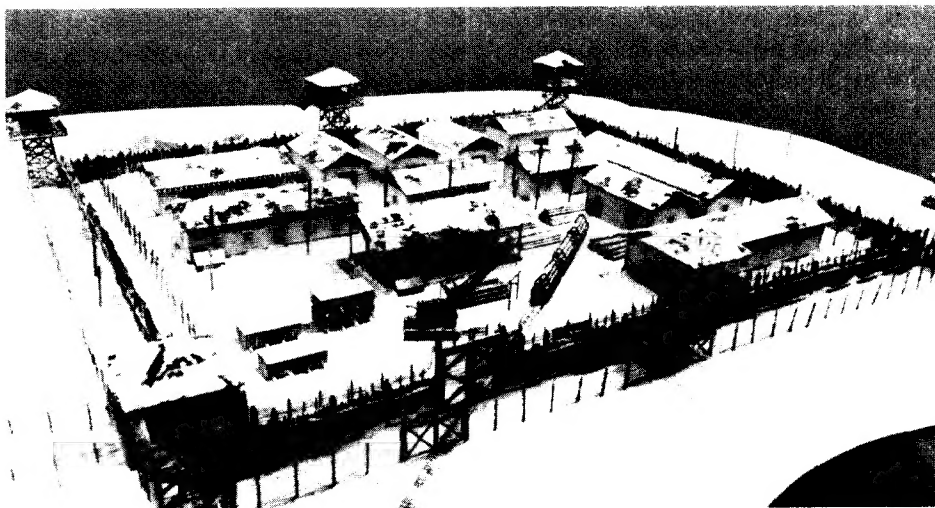
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### Current Assessment of Forced Labor

Our 1985 examination of the Soviet forced labor system indicates that the total number of forced laborers has increased to more than 4.5 million—about half of whom are confined to more than 1,200 heavily secured camps, some 200 prisons, and over 25 colony settlements (figure 1 and table 1). From the results of a sample survey we estimate that the number of confined forced laborers totals slightly over 2.3 million, up from 2 million in the 1970s.<sup>1</sup> Although our estimates of unconfined

*Figure 1. Scale model of a typical forced labor camp, assembled according to former prisoners' knowledge of camps.*



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**Table 1**  
**Forced Labor Population**

*Thousand persons*  
(except where noted)

	Estimate 1977	Estimate 1985	Confidence in Range of 1985 Estimates (percent)	Most Likely 1985 Totals
<b>Total</b>	<b>4,050</b>			<b>4,550</b>
Confined forced laborers <sup>a</sup>	2,100			2,300
Forced labor camps	1,800 <sup>b</sup>	1,900-2,200 <sup>c</sup>	95	2,050
Urban prisons	200	100-200	75	150
Colony settlements	100	32-100	75	100
Unconfined forced laborers	1,950			2,250
Parolees	450 <sup>d</sup>	500-600	60	550
Probationers	1,400 <sup>e</sup>	1,500-1,700	60	1,600
Those sentenced to correctional tasks	100	100	50	100

<sup>a</sup> See appendix B, table B-1 for detailed data.

<sup>b</sup> Revised in 1985 from 1,700 as a result of errors in 1977 survey, see appendix B, table B-2.

<sup>c</sup> Estimates from the sample survey are within a 95-percent confidence interval.

<sup>d</sup> Projected back at the rate of 1.9 percent per year from 500 estimated in 1981.

<sup>e</sup> Projected back at the rate of 1.9 percent per year from the 1,500 estimated in 1981.

forced laborers are much more tentative, [ ]  
[ ] the current number has also  
increased to an estimated 2.2 million. [ ]

Forced laborers represent a broad cross section of Soviet citizenry and include men, women, and juveniles. The majority are common criminals being punished for crimes such as theft, assault, rape, and murder; many are punished for disturbing public order under laws for "hooliganism." Others run afoul of laws criminalizing social behavior unacceptable to the Soviets. Some are punished for economic crimes, and even more are thrust into the system as examples during campaigns of expanded prosecution for corruption, speculation, or other sublegal practices. Dissidents are constantly under investigation and usually end up in prisons or in forced labor camps. [ ]

#### **Forced Labor Camps <sup>2</sup>**

The size and distribution of forced labor camps provide the most tangible evidence for evaluating the magnitude of the entire Soviet penal system and the changes in it (see foldout). To determine the current status of the camps, we conducted a two-phase, sample imagery survey, which examined old forced labor camps to determine change and searched for

<sup>2</sup> In this report, we use the term forced labor camp for what the Soviets call a corrective labor colony. Although Soviet laws and literature emphasize rehabilitative purposes of corrective labor, the evidence indicates that there is little rehabilitation other than political indoctrination and regimentation. We therefore believe that the term "forced labor" more correctly characterizes the system. [ ]

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**Table 2**  
**Number of Soviet Forced Labor Camps, 1985**

	Previously Recorded or Found During 1985 Survey <sup>a</sup>					Additions Projected From 1985 Survey				Total
	Identified During 1977	Old But Identified Since 1977	New Since 1977	Abandoned/ Converted Since 1977	Total Identified 1985	Old	New	Abandoned/ Converted	Total Projected 1985	
<b>Total</b>	<b>1,158</b>	<b>18</b>	<b>33</b>	<b>20</b>	<b>1,189</b>	<b>29</b>	<b>72</b>	<b>64</b>	<b>37</b>	<b>1,226</b>
By economic activity <sup>b</sup>										
Manufacturing	639	16	16	0	671	26	35	0	61	732
Construction	135	2	8	1	144	3	17	5	15	159
Construction materials	61	0	3	1	63	0	6	3	3	66
Mining	64	1	3	3	65	2	6	11	-3	62
Logging	126	0	7	11	122	0	15	31	16	106
Wood processing	190	0	2	4	188	0	4	23	19	169
Agriculture	23	0	0	1	22	0	0	1	1	21
Unknown	4	0	0	0	4	0	0	0	0	4

<sup>a</sup> Although some camps were identified between the 1977 and 1985 surveys, only those camps identified during the 1985 sample survey (four old, 11 new) were used as the basis for projections.

<sup>b</sup> Totals are larger than actual number of camps because some have dual economic activity.

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camps constructed since our last survey in 1977.<sup>1</sup> On the basis of our latest survey, we estimate that the Soviets now have 1,226 camps (table 2) and that 250,000 more prisoners can be housed in these camps than in the late 1970s. Most of the increase in housing capacity reflects a net expansion within the old camps. In addition, we found 11 new camps in a sample area search of more than 1.1 million square kilometers of the Soviet Union. Projecting the same rate of increase for the entire USSR, we estimate a total of 105 new camps built during 1977-84. For the same period, we estimate that a total of 84 camps were abandoned.

The Soviets classify their labor camps under four confinement regimes—special, strict, intensified, and

general—in decreasing order of severity. Prisoners are assigned to camps according to the type and criminal category of the crime committed. Recidivists, dangerous criminals, and political prisoners, for example, draw the special and strict regime camps where the work and living conditions are the harshest; first-time offenders and those with lesser sentences go to camps with intensified and general regimes.

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All forced laborers are required to work full-time and to meet assigned goals. Even though the cost of maintaining the camps, providing the administration, and maintaining the guard force may be high, the Soviets recover some of this cost from deductions in laborers' wages for upkeep, from the goods produced, and, indirectly, from the value of the labor expended. Because most of this activity occurs in areas or on jobs where normal labor may be considerably more costly

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or more difficult to supply, we believe that forced labor camps yield a slight net gain for the Soviet Government. [REDACTED]

### **Prisons and Colony Settlements**

Prisons and colony settlements also house some forced laborers. Forced laborers in camps may be sent to prisons for violating rules or may be transferred to less onerous colony settlements as a reward for good behavior. [REDACTED]

*Prisons* are the strictest incarceration facilities; they contain especially dangerous criminals, selected political prisoners, and other incorrigibles, as well as prisoners on their way to distant forced labor camps and those awaiting trial or already sentenced but needed as witnesses in other trials. In some of these prisons, inmates work full-time at small industrial shops within the compound or in cells set up for manufacturing small items. [REDACTED]

We believe that the number of forced laborers in prisons is small, probably in the 100,000 to 200,000 range. To determine this range, we used our survey to estimate urban prison capacity and assumed about one-half of the population was nonlaborers. Nonlaborers are those in transit or investigatory isolation. [REDACTED]

*Colony settlements* are the mildest form of Soviet forced labor and add relatively small numbers to the forced labor population. They operate with minimum security, which allows the forced laborers some measure of freedom. Those sentenced to terms at colony settlements have been convicted of crimes of negligence or unpremeditated crimes carrying lesser sentences or have been transferred from forced labor camps. Colony settlements consist of enclosed barracks areas, which are often located near forced labor camps, and they are usually found in outlying regions undergoing rapid economic development. Inmates are forced to take designated jobs in the area; but their restrictions are fewer compared to those in camps, and they are permitted to leave the settlement compounds for work and other privileges. With permission from authorities, families may live with inmates inside the compound. [REDACTED]

From our 1985 survey, we estimate that the identified colony settlements house about 32,000 forced laborers. [REDACTED] estimated the population in colony settlements at more than 100,000. [REDACTED]

[REDACTED] We therefore believe other colony settlements probably are in the country and that the number of forced laborers in them could be close to the estimated 100,000. If so, the settlements are likely to be in locations with forced labor camp concentrations. One such colony settlement was newly identified adjacent to a forced labor logging camp in the far northwest (figure 2). [REDACTED]

### **Unconfined Forced Laborers**

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The use of unconfined forced laborers has grown rapidly since its inception in 1964 and may now account for almost half of the country's forced laborers. The many advantages of using these forced laborers include:

- Deployment of labor to remote regions where no work force exists. 25X1
- Establishment of a labor force in northern regions where wage differentials and incentives required for free (not forced) workers are extremely costly.
- Retention of a labor force in regions lacking the infrastructure and amenities needed to keep free workers.
- Much lower maintenance costs than at heavily secured and guarded forced labor camps.

The threat of incarceration in camps may also offer some incentive for unconfined forced laborers to work more efficiently than confined laborers. In addition, although the unconfined forced labor system removes criminals from the settled regions, it introduces offenders to newly developing regions, where they often remain after their sentences expire. [REDACTED] 25X1

By far the largest numbers of forced laborers unconfined are parolees and probationers. When the first such program was decreed by the Supreme Soviet in 1964, it was limited to prisoners from forced labor

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### *Evolution of Economic Use of Soviet Forced Labor*

*The forced labor system originated soon after the 1917 revolution as a modification of the prison system that had existed under the Tsars. At first, labor was associated mainly with camp upkeep. However, some camps supplied workers to small factories and workshops and to the construction industry, and some prisoners convicted of minor crimes worked on agricultural state farms. The overall economic role of forced labor was initially very small.* [ ]

*The decade of the 1930s under Stalin saw the forced labor system become a significant economic force. The policy of collectivization uprooted millions of peasants and added considerable numbers to forced labor. At the same time, the first five-year plans made ample use of labor from the system, which had grown to about 2 million prisoners in the early 1930s. Forced labor provided the physical labor needed for large construction projects: canals, railroads, roads, dams, and industrial construction. There was little concern for protection of human life and many perished—especially in inhospitable regions. Secured camps were built along construction routes and at industrial sites to confine the workers. At this time, large numbers of forced laborers were used in expanding the timber industry in the northern regions. Timber and wood products were in high demand in the expanding economy and, as a valuable export, earned the Soviets much-needed foreign exchange.* [ ]

*In addition, the Soviets used increasing numbers of forced laborers in mining operations—especially in the huge undertaking to develop the gold fields of the Kolyma River area in northeastern Siberia. The Soviet need for gold, for its purchasing power and as an export, coincided with the availability of a large and expendable labor force. Cruel treatment, inadequate food, the frigid cold, and damp working conditions produced a high-mortality rate for these forced laborers—estimated at more than 3 million during*

*the 15- to 20-year period of intensive operation. During the same time, the mining of coal, iron ore, and other valuable minerals by forced laborers, while second in magnitude to gold, probably contributed considerably to the expansion of the Soviet heavy industry.* [ ]

*During World War II, large numbers of foreigners—Poles, Balts, Romanians, and other displaced persons—were deported to the Soviet forced labor system or to forced settlement in outlying regions. According to thousands of reports from Poles who were released from camps to join allied fighting forces in 1942, their labor covered almost every economic activity: lumbering; construction of dams, factories, and pipelines; mining of iron, coal, various nonferrous metals, and nonmetallic minerals; maintaining and building roads, railroads, and canals; and working in machine shops, construction materials plants, ore-processing industries, and oilfields. They mainly performed manual labor, including loading and unloading, earthmoving, and land clearing. Later, German prisoners of war were added to the forced labor system along with various non-Russian minorities (Volga-Germans, Tatars, Checheno-Ingush, Kalmyks, and Karachi) who were accused of collaboration with the Germans. A total of some 15 million forced laborers, estimated in 1947 when the system reached its peak, worked to reconstruct the Soviet economy.* [ ]

*With three decades of experience in use of confined forced laborers, the Soviets instituted programs for unconfined forced laborers in the mid-1960s. Selected prisoners were released from confinement to complete their sentences at large construction projects. Another program involved sentencing selected criminals directly to unconfined labor on major projects. These programs eliminated or drastically reduced overhead costs for facilities, food, and administration.* [ ]

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**Table 3**  
**Number of Forced Laborers in Camps,**  
**by Economic Activity <sup>a</sup>**

Thousands

	Number in Old Camps	Net Expansion in Old Camps as of 1985 <sup>b</sup>	Addition From New Camps as of 1985	Total in Camps as of 1985
<b>Total</b>	<b>1,800</b>	<b>145</b>	<b>105</b>	<b>2,050</b>
Manufacturing	1,015	140	45	1,200
Construction	200	15	20	235
Construction materials	85	5	5	95
Mining	75	0	10	85
Logging	140	30	20	190
Wood processing	255	15	5	275
Agriculture	25	0	0	25
Unknown	5	0	0	5

<sup>a</sup> See [ ] table B-2 for detailed data<sup>b</sup> Includes projections for abandoned camps.

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camps, some of whom were designated eligible for conditional release (parole) from confinement to finish out their sentence in compulsory labor at construction sites. On the basis of fragmentary data from former prisoners [ ] we estimate that about one-half of all persons under confinement are paroled before the end of their terms to serve an average of two years as unconfined forced laborers. The number of parolees has always been difficult to estimate, but it has probably increased from the 500,000 estimated in 1981 [ ]

[ ] estimated that the number of parolees working in obligatory labor would be greater than 500,000. We believe that the current total ranges from 500,000 to 600,000, and, if the number of parolees from camps has risen in proportion to the increase in camp population noted earlier, the most likely estimate is near the midpoint of this range. [ ]

Sentences of probation with compulsory labor have been increasing steadily since a 1970 Supreme Soviet decree authorized courts to issue them as an alternative to confinement. As a result of a growing trend [ ] we

estimated that by the early 1980s about half of the

criminal court cases resulted in sentences to compulsory labor without confinement. Given the recent expansion in forced labor camps as an indicator and the continuance of anticrime and anticorruption campaigns, we believe that the number of probationers probably has risen correspondingly. Our estimate of 1.5 million in 1981 [ ]

[ ] probably has increased to about 1.6 million if calculated at an annual growth rate comparable to that noted at camps. [ ]

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The third type of forced labor without confinement adds very little to the economic advantages of the system. Termed correctional tasks without deprivation of freedom, this aspect of the Soviet system permits sentencing of persons convicted of certain minor crimes to work at reduced (5 to 20 percent) wages either at their regular jobs or at other designated places within their district of residence, which allows them to live at home. This type of punishment gives the Soviets a supplemental labor resource to be directed where needed within an urban area. [ ]

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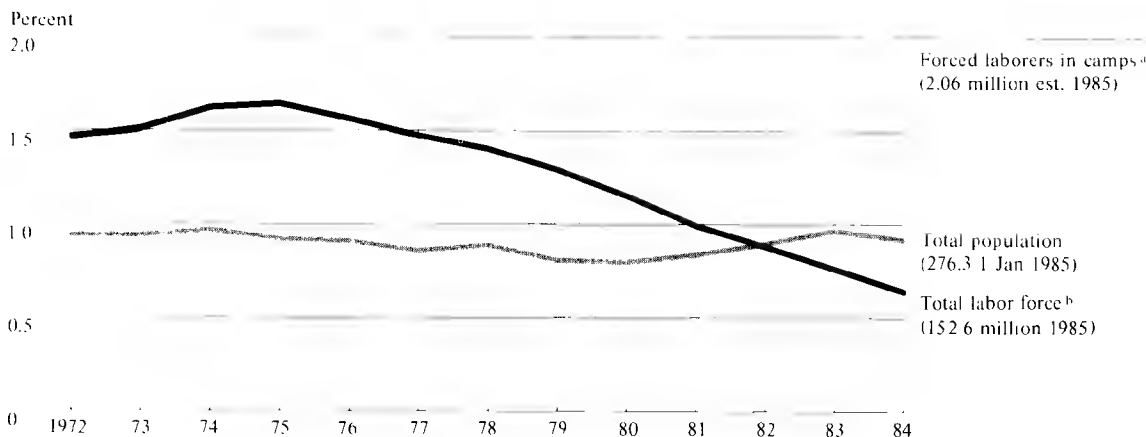
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**Figure 3**  
**USSR: Annual Population**  
**Growth Rates**



<sup>a</sup> Average growth rate between surveys  
<sup>b</sup> Includes military and civilian

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[redacted] estimated the number of persons in this type of unconfined forced labor at 100,000. [redacted]

#### Use of Confined Forced Laborers

On the basis of our sample survey, the use of forced labor in camps has increased in all economic categories except logging since 1977 (table 3). The comparison of new and expanded facilities with abandoned camps and decreased barracks space shows that the numbers of prisoners engaged in general manufacturing and in construction work increased by nearly 20 percent, and in production of construction materials by 13 percent. Because slightly more camps were abandoned than were built in logging areas, we estimate that the number of prisoners involved in this activity has decreased by 8 percent. [redacted]

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#### Role of Forced Labor

Forced laborers make up an increasingly important segment of the Soviet labor force in many areas and industries. During 1 January 1977 to 1 January 1985 the total labor force grew from 140 million to 152 million—an 8.9-percent increase—while the forced labor component confined in camps increased by an estimated 14 percent and the total forced laborers by an estimated 12 percent (figure 3). [redacted]

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We believe that more than half of the forced laborers in camps work in manufacturing; others are engaged in logging, wood processing, and construction. To a lesser extent, forced laborers are involved in mining operations and in agricultural labor. Large-scale construction projects probably continue to draw heavily from the unconfined forced laborers. [redacted]

**Manufacturing/Industrial.** Manufacturing uses the largest number of confined forced laborers—1.2 million in 732 camps—and has had the largest increase since 1977. According to our 1985 survey, three-fourths of the increase is accounted for by expansion of older camps located in industrialized regions

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throughout the Soviet Union. To accommodate more prisoners at old camps, the Soviets built additional barracks or additions to existing barracks [redacted]. The remaining one-fourth of the confined forced laborers added in manufacturing are in new camps near large cities outside the Central Industrial Region and the industrialized Ukraine: Petrozavodsk and Novgorod in the northwest, Yoshkar-Ola and Novocheboksarsk in the Volga region, Kyshtym in the Urals, Nizhnevartovsk in West Siberia, Ulan Ude in East Siberia, and Khabarovsk and Ussuriysk in the Soviet Far East. [redacted]

The distribution of new camps may indicate that certain regions lack sufficient numbers of forced laborers for their industrial base or that expanding industries warrant a new influx of forced laborers. Workers from some of the new camps probably provide secondary support—making parts or components for larger industries located nearby or using byproducts from main industries for their own manufacture. Construction in 1979 of a camp at Novocheboksarsk, for example, probably has some association with the nearby chemical plant—the only industry in the city. A new camp in the heart of Yoshkar-Ola has its own secured industry but is squeezed between two other factories to which it may be subordinate [redacted]

[redacted] Two new camps on the outskirts of Khabarovsk supplement other forced labor camps in the same area, indicating that the existing industries can employ additional numbers of forced laborers. In fact, one camp is built on the site of a former secured working area. [redacted]

**Logging and Wood Processing.** Most of the 400,000 prisoners associated with logging and primary wood processing work at the 275 forced labor camps located at the southern edge of dense taiga forests in the northern part of the European USSR and the northern Urals. This concentration may be changing somewhat, however, as the timber industry of East Siberia expands and the logging areas of European USSR contract. In the relatively new areas, the past pattern of forced labor usage seems to be repeating itself. For example, in the outermost areas where felling and hauling timber takes place, 10 or more camps are not unusual within an area of a few thousand square kilometers. In these areas, camps are built as logging

areas expand and are abandoned as timber is depleted. Camps at sawmills and transshipment points phase out only after the entire area is logged out. [redacted]

Forced laborers are most often used in the timber industry where transportation access is available or where large timber stands permit concentrations of prisoners in one general area. Consequently, most seem to arrive only after the facilities, and especially the transportation access, are well established. This may be the case in East Siberia where an area north of an old section of the Baikal-Amur Mainline (BAM) from Tayshet to Ust'-Kut is the scene of extensive timber exploitation in virgin pine, fir, and spruce forests. Some forced labor camps were already in place in 1977—a particularly large concentration of camps stretches along a branch line north from Nizhnyaya Poyma near Tayshet—and the influx in this sector of East Siberia has increased during the last few years. Five new camps for timber exploitation have been identified since 1977. Four of these are in areas that have never had forced laborers: Nifant'yeva near Yeniseysk at the junction of the Yenisey and Angara Rivers, Ust'-Il'msk and Kezhma on the Angara, and Novoselovo—the first camp along the new section of the BAM located midway between Ust'-Kut and Lake Baikal. The camp under construction at Novoselovo is adjacent to a huge secured and rail-served area possibly destined to be a timber processing center [redacted]. If the usual pattern of forced labor use in the timber industry follows at Novoselovo, we expect that several forced labor camps will be built in the surrounding area to supply the Novoselovo focal point with logs for processing and for subsequent transport via the BAM. [redacted]

**Construction.** One of the most common and probably more effective uses of forced laborers is in the construction industry. The forced labor system has supplied manual labor to build long-distance pipelines and canals, large-scale industries, and urban structures. It has given the Soviets a supplemental labor pool in regions where the conditions choke off the normal labor supply. About 160 camps with nearly

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240,000 prisoners are associated with construction either as a sole or secondary function. [REDACTED]

*Urban construction* projects using forced laborers include apartment buildings, hotels, and government office buildings. Occasionally, entire new cities have been constructed using forced labor: Shevchenko, the site of a nuclear-powered desalinization plant on the Caspian Sea; Navoi, the petrochemical city in the natural gas region of Soviet Central Asia; and Magadan, the main support city for resource development in the Far Northeast. One camp at Shevchenko, which was barely under construction in 1977, now houses some 3,000 prisoners; in all, there are more than 20,000 forced laborers in the city, most of whom are engaged in construction projects. [REDACTED]

Other forced labor camps associated with urban construction spring up in established cities undergoing expansion or developing new industries. Such is the case with new construction camps at Karshi in Soviet Central Asia, Yoshkar-Ola in the Volga-Vyatka region, and Chernogorsk in East Siberia. A new camp built in the 1980s at Volodarskoye in Kazakhstan [REDACTED] provides laborers for several secured housing and industrial construction sites nearby. [REDACTED]

*Industrial construction* is another major occupation for forced laborers. Two newly identified forced labor camps were recently found at large industrial construction sites: at an airframe plant across the Volga River from Ul'yanovsk [REDACTED] and at a petroleum refinery at Neftezhavodsk on the edge of the Karakum desert in Turkmenia [REDACTED]. Some forced labor camps identified during the construction phase at a large industry remain after construction is completed; prisoners probably perform maintenance or low-level repair work rather than skilled work in the industry. [REDACTED]

*Transportation construction* projects may use some confined forced laborers for preliminary clearing operations within the local area of their camps. However, the absence of new forced labor camps along construction routes of major railroads and pipelines indicates a change from previous years, when such laborers were used almost exclusively in large projects

to build the Baltic-White Sea and Volga-Don canals and the northern railroad to Vorkuta. Now, unconfined forced laborers are available for this work. [REDACTED]

**Mining and Construction Materials.** Mineral extraction and processing, once major forced labor endeavors, now use a smaller but economically important number of prisoners. From our imagery surveys, we have located 128 camps adjacent to mining or mineral processing areas where several important metals and a variety of construction materials are being worked (appendix A). We estimate that these camps house 180,000 forced laborers. In the absence of other industry or economic activity in the immediate area, we assume that these forced laborers work in the mines or support mining operations. [REDACTED]

[REDACTED] prisoners did not operate the mines but were used in auxiliary work on the surface, such as cutting timber. [REDACTED]

Several new forced labor camps of this type have been recently identified; two of them provide some insight into the increased need for construction materials in the Soviet economy. A camp in the late stages of construction is located at a huge limestone extracting and processing complex at Vasalemma in Estonia [REDACTED]. The camp as it now stands adds more than 1,700 prisoners to the work force of nearly 3,500 forced laborers at two other nearby camps, making this one of the largest concentrations of forced laborers in the country. The limestone is crushed for roadbeds or processed into cement. Another new forced labor camp at Kharp, in the far north on the railroad to Labytnangi, is located next to a crushed rock and gravel plant. Kharp is one of the few sources in West Siberia for this commodity, which is needed for constructing railroads, roads, and structures serving the expanding oil and gas industry of West Siberia. Arctic climate, isolation, and strenuous work make Kharp a natural site for forced labor; these conditions typically do not attract free labor. [REDACTED]

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**Agriculture.** We can identify [ ] few forced labor camps associated with agricultural production. This category is limited to camps sited in the midst of agricultural fields where no other economic activity occurs. A notable example is the tea plantations of the Transcaucasus region [ ] where we assume that the forced laborers maintain the bushes or harvest and process the leaves. [ ]

[ ] prisoners at Gali in the Georgian SSR worked chiefly on tea cultivation. [ ] an indirect connection between forced labor and agriculture: [ ] a camp near Astrakhan' [ ] made crates for packing and shipping locally grown fruits and vegetables. [ ]

We estimate that only about 27,000 forced laborers from 21 forced labor camps engage in agricultural work. This probably reflects the lack of need for labor in this economic activity, as well as Soviet reluctance to place prisoners near food products because control of food rations is a major way of punishing and rewarding prisoners' work and behavior. Most of these camps are located in the southern part of the country. Although expansion occurred in five of the 11 camps surveyed, we identified no new agricultural camps during the imagery search of 1985. [ ]

#### Use of Unconfined Forced Laborers

The Soviets use this large and mobile labor force widely in construction and industry. [ ] [ ] unconfined forced labor is dispatched to virtually every kind of major construction project in the country, but especially in labor-deficient and hardship areas. These laborers are used mostly as unskilled workers in building large industrial plants; some, such as engineers and technicians, even work in their specialties. Others work on large-scale housing projects, major railroads, and cross-county pipelines. In addition to clearing the right-of-way and preparing access roads, parolees and probationers have been used to prepare sites and build compressor stations for major pipelines. [ ] in 1985 that unguarded forced laborers from a nearby

colony settlement built compressor stations at Ivdel' on the export gas pipeline. [ ] 25X1

Unconfined forced laborers—often called *khimiki* (chemists) because they were sentenced to construction sites of chemical plants during the inception of the program—frequently make up much of the unskilled labor force at construction sites. [ ] [ ] thousands of these forced laborers were used in building the Kama truck plant at Brezhnev (formerly Naberezhnyye Chelny). [ ] [ ] large forced labor usage—probably unconfined laborers because no camps were found along its route—in construction of the BAM, which is opening access to the resources of East Siberia. [ ] 25X1

Besides construction activities, the Soviets sometimes assign unconfined forced laborers directly to large, labor-intensive industries. Reinforced concrete products plants routinely employ these forced laborers, [ ]

because the difficult and low-paying work does not attract enough free labor. [ ]

[ ] in 1980 that nearly all probationers sentenced at Rostov-na-Donu were assigned to work in the agricultural machinery plant, most of those at Taganrog worked at a combine plant, and a large number of probationers at Novocherkassk were assigned to a synthetic materials plant or to an electric locomotive plant. [ ] 25X1

Given Soviet labor shortages, especially in the eastern regions, we expect the uses of unconfined forced laborers to grow. These laborers partly fill the need for manual laborers, a resource that is becoming scarce as the population becomes more educated and fewer people accept unskilled jobs. Unconfined forced labor has several advantages: for the Soviet construction and industrial managers, it provides a source of labor for difficult and unattractive jobs; for the convicted persons, it offers a way to work off sentences outside the harsh confines of the camps; and for the Soviet regime, it provides an economically efficient way to effect punishment. [ ] 25X1

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### Living Conditions

Much of the information from former prisoners reaffirms that the Soviets maintain abominable living and working conditions for forced laborers in camps and violate basic human rights through policies that debilitate and degrade prisoners. Moreover, the camps are a tool of repression, representing the threat of harsh confinement for the Soviet populace as well as for forced laborers not in camps. Unconfined forced laborers fare slightly better, because they have some choice in acquiring food and they live and work under less oppressive conditions. [ ]

In many manufacturing industries, prisoners endure hazardous and unventilated surroundings; they often operate defective machinery and wear no protective gear. A 1983 report from a camp at an East Siberian sawmill described daily accidents with power saws. In his testimony before a US Congressional Subcommittee in 1983, Georgy Davydov, a former Soviet prisoner, cited frequent use of defective and poorly timed punch presses or lathes and grinding tools having no safety devices. [ ]

Working hours often exceed the normal workday prescribed for Soviet forced laborers. Even though the eight-hour day, six-day week work schedule is established by Soviet law, some camp officials extend the forced labor workday to 12 hours and work prisoners on free days to meet production goals. Travel time to worksites, which in some logging and construction areas can be lengthy, adds several hours to the workday. Moreover, some prisoners are forced to extend their working hours to fulfill unrealistic production quotas required to get full food rations. [ ]

The Soviet climate and terrain also add to the miseries of forced laborers, especially in the cold and swampy northern regions. Reports from former prisoners indicate that they work in almost all weather, often without adequate clothing, boots, and gloves to protect them against frigid temperatures. Sometimes punishment involves prisoners being placed in isolation cells without adequate clothing, according to an inmate in 1983. The combination of exposure, unhealthy working environment, and insufficient food produces a high incidence of disease among prisoners,

especially pneumonia, tuberculosis, ulcers, and other gastrointestinal disorders. Medical treatment for them is of marginal quality and is often arbitrarily applied. Within the last few years, several dissidents, who as a group generally receive the harshest treatment in camps and prisons, have died as a result of improper medical care or a denial of treatment. [ ]

Inadequate food stands out as one of the most inhumane and widespread features of the forced labor system. The insufficient supply and the extremely poor quality of food help to keep the cost of camp and prison operations at an absolute minimum. Moreover, the Soviets deduct the cost of food, as well as clothing and camp maintenance from prisoners' wages. When prisoners fail to meet assigned work quotas or violate camp rules, the authorities reduce the already meager food rations. A former prisoner described the strict regime diet as "disguised starvation." [ ]

Cruel treatment at the hands of camp officials, guards, and other prisoners adds another dimension to the punishment of forced laborers. Beatings for minor camp infractions or for inability to perform work are not unusual; sometimes they occur at the whim of sadistic guards and officials. Among prisoners, cruelty and quarrels arise over space, clothing, and food; in 1985 an imprisoned refusenik at an East Siberian camp described beatings of new prisoners by other prisoners as a routine occurrence. This physical abuse in an environment of overwork and lack of proper nourishment often makes life so unbearable that forced laborers protest by sabotaging industrial machinery or—in extreme cases—by committing acts of self-mutilation or suicide. [ ]

### Outlook

We believe that the size of the Soviet forced labor population in the Soviet economy will continue to increase at about the same rate as in recent years because:

- Campaigns against crime, corruption, alcoholism, and slack labor performance provide a pool of forced laborers.



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- Difficulty in attracting free labor to unskilled jobs in construction and resource development projects in less developed regions of the country will maintain the pressure to use forced laborers.
- The use of unconfined forced laborers is an economical approach to punishment that supplements free labor in selected industries.
- The underlying economic and political rationale for the system has not been undermined to any significant degree by international human rights pressures.

The concentration of forced labor in the construction and manufacturing industries will probably continue because it has proved most useful to the economy. Other uses of forced laborers—in logging, wood processing, mining, and agriculture—are likely to persist, although their contribution to the economy will remain secondary. [ ]

reforms, changes in laws, or authentic amnesties, although unlikely, would lower the numbers of forced laborers in much the same way it did for a short period during the Khrushchev era following the harsh Stalinist times. [ ]

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Although the above assessment represents our best estimate of the future direction of Soviet forced labor, we recognize that changes in political or economic policies under Gorbachev could directly or indirectly affect the numbers and uses of forced laborers in the near future:

- A drastic deterioration in political stability within the Soviet Union requiring purges and mass arrests, although unlikely, would cause the forced labor population to rise sharply.
- The numbers of forced laborers could surge if a need for natural resources forced the Soviets to initiate extraordinarily large economic expansion efforts in remote and undeveloped areas, where the labor force is minimal and the acquisition of free labor is costly.

An overall reduction in the forced labor system is least likely. The need for forced laborers in the economy would decline in the highly unlikely case that Gorbachev's economic reforms reduce poor performance and absenteeism, increase worker productivity, and produce more positive attitudes among the rank and file. Likewise, the introduction of liberal

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**Appendix A**

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**Products of Forced Labor Activity**

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It is difficult to determine how products of forced labor are used or to quantify their value to any one industry. [ ] we can identify only the general type of activity at camps: manufacturing, logging, wood processing, mining, construction, and agriculture. At most manufacturing camps, however, all that can be determined is that an industrial area is adjacent to the camp. Information on specific products manufactured by forced laborers can only be obtained from former Soviet citizens who either worked in camps or were associated with them as guards or drivers. [ ]

Information on products produced by forced laborers has been sketchy at best and does not permit a definitive picture of the scope of their involvement. Often manufacturing camps have a working relationship with large factories outside the forced labor system; camps produce and send component parts to the factories for use in final products we cannot identify. At other times, the end product—for example, a generator or transistor—is produced, but there is no indication how the product will be used. [ ]

Little is known about the destination, or markets, for specific products made by forced laborers. Some former prisoners have indicated that their output goes to domestic outlets; rarely do they cite export markets for their products. One former prisoner reported that clothing made in camps is mostly of poor quality and is sold only on the domestic market; others have stated that some sewn goods—clothing, underwear, gloves, and boots—are made for other forced laborers. Some furniture, one of the most common forced labor products, is produced for use in barracks or other buildings of camps. More often, forced labor products or components are sent to unknown destinations for finishing or for further assembly. Frequently, prisoners make nondescript boxes or containers for shipping a variety of products that probably are used throughout the country. Raw materials—including minerals, building materials, and lumber—may be the most valuable forced labor output. We have no way to trace the transport of these commodities; they could go to Soviet enterprises or could be mixed with similar items destined for export. [ ]

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[ ] Forced laborers in camps located in the outer reaches of logging areas, for example, where no other economic activity exists, are assumed to cut or haul logs or prepare access roads. At focal points for primary wood processing, camps are often directly connected by fenced walkways to heavily secured sawmills and timber transshipment work areas. [ ]

[ ] Likewise, when camps are adjacent to or within security fences of identifiable industries, especially those producing construction materials, such as bricks and concrete products, prisoners probably supply some of the production, maintenance, or repair force. When camps are located at isolated mining areas or in single-crop agricultural areas, we assume the forced laborers produce or process that commodity. [ ]

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**Economic Activity Involving Forced Labor****Manufacturing**

- *Parts and components*—agricultural machinery; auto batteries, gear sets, mufflers, parts, radiators, starters, tires; battery cases and parts; boilers; capacitors; compressors; electric motors and pumps; filters; hydrofoil parts; lathe parts; milking machinery; molds and dies; oil; pump valves; pipes and pipe fittings; pump parts; radio components, housings, and parts; tape recorder cables; television cabinets; tractor generators and parts; truck parts; and water valves.
- *End products*—agricultural tools; ashtrays; bags of cloth, paper, tarpaulin, woven material; barbed wire; bed frames; bedsheets; boots; boxes of cardboard and wood; bricks; brooms; buttons; cash registers; chemicals; chess sets; clocks; clothes; coat hangers; concrete posts; cots; dishes; disks for agriculture; doors; drawer pulls; electric irons, heaters, and outlets; elevators; fans; fertilizer; fluorescent lights; floorboards; furniture; glass chandeliers; gloves; iron cutters; lamps and light fixtures; lids for glass jars; locks; lumber; mattresses and springs; mobile kitchens; nails; office safes; paper products; picture frames; ranges and hot plates; shoes; soap dishes; stoves; tanks for crop spraying;

tents and tent trailers; toys; wooden barrels, door-frames, handles, railroad ties, souvenirs, tables, and wagons; watches; and zippers.

**Construction**

- *Industrial plants*—airframes, brick cement, chemical, concrete products, oil refinery, plastics, and rubber.
- *Other facilities*—apartments, bridges, dams, hospitals, hotels, livestock complexes, pipelines, railroads, and roads.

**Mining**

Asbestos, bauxite, clay, coal, gold, granite, gravel, iron ore, limestone, manganese, molybdenum, peat, sand, silver, stone, stone block (coquina), and uranium.

**Industry**

Agricultural machinery, concrete products, electric locomotives, oil refinery, plastics, steel, and synthetics.

**Agriculture**

Reeds and tea.



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**Table B-1**  
**Estimated Soviet Confined Population**

	1977			1984			Population Growth 1977-84 (percent)	Annual Population Growth <sup>d</sup> (percent)
	Floorspace <sup>a</sup> (thousand square meters)	Capacity (thousand persons <sup>b</sup> )	Population (thousand persons <sup>c</sup> )	Floorspace (thousand square meters)	Capacity (thousand persons)	Population (thousand persons)		
Total	6,683	2,387 (+ 66)	2,148 (+ 59)	7,523 (+ 462)	2,687 (+ 164)	2,418 (+ 148)	13 (+ 7)	1.7
Forced labor camps	5,611 (+ 184) <sup>e</sup>	2,004 (+ 66)	1,804 (+ 59)	6,409 (+ 461)	2,289 (+ 165)	2,060 (+ 148)	14 (+ 8)	1.9
Urban prisons	949	339	305	1,013 (+ 60)	362 (+ 21)	326 (+ 19)	7 (+ 2)	0.95
Colony settlements	123 (+ 12)	44 (+ 4)	40 (+ 4)	101 (+ 20)	36 (+ 7)	32 (+ 6)	- 20 (+ 11)	- 3.1

<sup>a</sup> Floorspace estimates are derived by measuring external dimensions of selected prisoners' barracks using satellite imagery and by applying standardized barracks sizes during survey analysis.

<sup>b</sup> The capacity estimates assume 2.8 square meters per prisoner as was used in previous studies. This number was derived from former prisoners' reporting on housing conditions.

<sup>c</sup> The population estimates assume a 90-percent utilization rate, based on reporting by former prisoners.

<sup>d</sup> Changes because of misclassification and other errors are not included in the percent growth.

<sup>e</sup> The plus or minus ranges are 95-percent confidence intervals that reflect uncertainty because of sampling.

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**Table B-2**  
**Estimated Floorspace at Forced Labor Camps,**  
**by Economic Type**

	Manufac- turing	Construc- tion	Construction Materials	Mining	Logging	Wood Processing	Agricul- ture	Un- known <sup>a</sup>	Overall <sup>b</sup>
<b>1977 Survey</b>									
Number of camps	639	135	61	64	126	190	23	4	1,158
Area (thousand square meters) <sup>c</sup>	2,989	594	262	227	430	785	75	12	5,374
<b>1985 Survey</b>									
Sample size	22	22	14	14	36	21	11	0	132
Abandoned/ converted camps	0	1	1	3	11	4	1	0	20
Abandoned/ converted area	0	3.4	4.8	10.8	34.6	10.5	4	0	60.7
Camps remaining	22	21	13	11	24	18	10	0	112
Average 1977 area error	0.0766	0.0766	0.0766	0.0766	0.0766	0.0766	0.0766	0.0766	0.0766
Total change in area because of new/ dismantled barracks	15.6	13.0	6.6	11.4	4.5	14.7	7.6	0	67.4
Camps missed in 1977 <sup>d</sup>	4	0	0	0	0	0	0	0	4
New camps	4	2	1	2	3	0	0	0	11
<b>1985 Estimates</b>									
Camps missed	42	5	0	3	0	0	0	0	47 (± 29) <sup>e</sup>
Number in 1977	681	140	61	67	126	190	23	4	1,205 (± 29)
Area missed	128	16	0	4	0	0	0	0	148 (± 118)
Corrections for 1977 area errors	48	10	4	4	8	13	2	0	89 (± 141)
Area 1977	3,165	620	266	235	438	798	77	12	5,611 (± 184)
Estimated man- power 1977 <sup>f</sup>	1,017	199	85	76	141	257	25	4	1,804 (± 59)
Abandoned/ converted camps	0	6	4	14	42	27	2	0	84 (± 34)
Old camps 1984	681	134	57	53	84	163	21	4	1,121 (± 45)
Floorspace abandoned	0	16	13	43	117	79	7	0	275 (± 117)
New/dismantled barracks	439	69	27	46	14	118	15	1	729 (± 295)
Area old camps 1984	3,604	673	280	238	335	837	85	13	6,065 (± 367)
Manpower old camps 1984	1,158	216	90	77	108	269	27	4	1,949 (± 118)
New camps	51	25	9	9	22	6	0	0	105 (± 84)
Area new camps	145	64	20	27	68	20	0	0	344 (± 279)
Number of camps 1984	732	159	66	62	106	169	21	4	1,226 (± 95)
Camp area 1984	3,749	737	300	265	403	857	85	13	6,409 (± 461)
Estimated man- power 1984	1,205	237	96	85	130	276	27	4	2,060 (± 148)

<sup>a</sup> The growth at the four camps of unknown activity was assumed to be 8.6 percent.

<sup>b</sup> Because some camps are counted under more than one economic activity, for some entries the value in the overall column is not the sum of the values in the other columns.

<sup>c</sup> All area figures are thousand square meters; estimated manpower is per 1,000 persons.

<sup>d</sup> "Missed" camps refers to those that existed but were not identified during the 1977 survey.

<sup>e</sup> The plus or minus ranges are 95-percent confidence intervals that reflect uncertainty because of sampling.

<sup>f</sup> The manpower estimates assume a design capacity of 2.8 square meters per person; a 90-percent utilization rate; and for those camps with two economic activities, 50 percent of the population is engaged in each activity.

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**Table B-3**  
**Estimates for Camps Constructed Since 1977**  
**and for Camps Missed in 1977**

	High Potential	Average Potential	Overall
Area available for new camps (thousand square kilometers)	1,938	11,621	13,559
Area searched (thousand square kilometers)	255	901	1,156
New camps			
Number identified	7	4	11
Projected number	53	52	105 (± 84) <sup>a</sup>
Average floorspace <sup>b</sup>	3.28 <sup>c</sup>	3.28	3.28 (± 0.4)
Projected floorspace	174	170	344 (± 279)
Missed camps			
Number identified	1	3	4
Projected number	8	39	47 (± 29)
Average floorspace	3.15 <sup>c</sup>	3.15	3.15
Projected floorspace	25	123	148 (± 118)

<sup>a</sup> The plus or minus ranges are 95-percent confidence intervals and reflect uncertainties because we searched only a portion of the area where new camps might be located and measured a sample of the new camps.

<sup>b</sup> Total floorspace measured in thousand square meters.

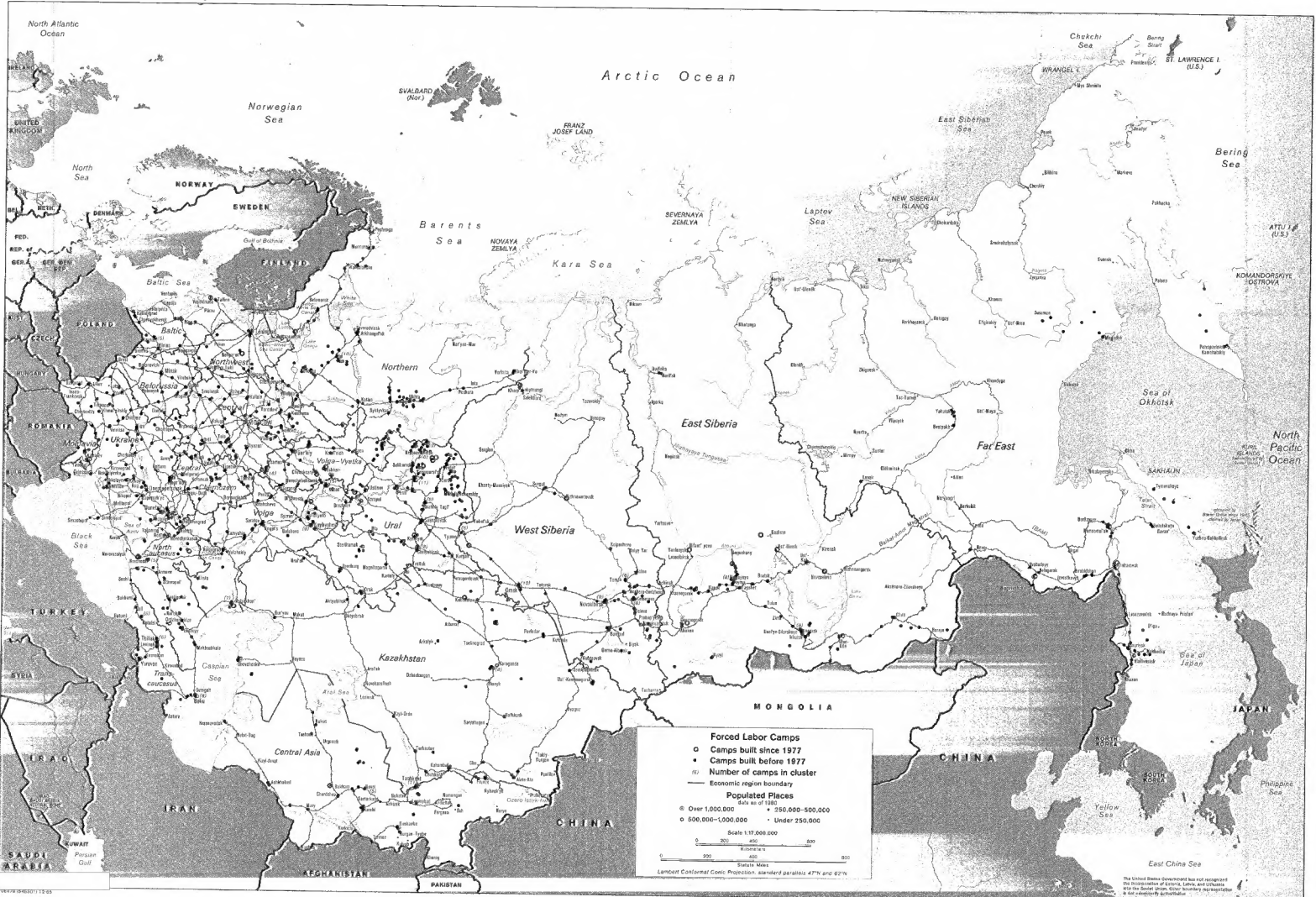
<sup>c</sup> Average floorspace (3,279 square meters and 3,157 square meters) was obtained by measuring all new and missed camps located since 1977.

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Figure 14  
USSR: Forced Labor Camps, 1984

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